

**REMARKS**

Claims 1, 3, 4, 6, 7, 9, 10, 12 to 20, 23 and 24 are canceled without prejudice, and therefore claims 21, 22 and 26 are now pending and being considered.

It is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

*Claim 26 has been allowed, but has been rewritten to include "comprising" (instead of wherein). No new matter is added. Approval and entry are respectfully requested.*

With respect to paragraph two (2) of the Final Office Action, Applicants thank the Examiner for considering and making of record all of the references in the IDS filed on April 2, 2002.

With respect to paragraph nine (9), Applicants thank the Examiner for allowing claim 26, and for indicating that claims 21 to 25 would be allowable if rewritten to overcome the 101 rejections. While the rejections may not be agreed with, to facilitate matters, claims 23 to 25 are canceled without prejudice. The rejections as to claims 21 and 22 are traversed, since these claims are to a *method* and *not a program per se*, as explained below. *It is noted that the Advisory Action of July 2006 agreed that the rejections were overcome as to claims 21 and 22, and that these claims should be allowed.* It is therefore respectfully requested that the 101 rejections be withdrawn.

With respect to paragraph four (4) of the Final Office Action, the requirement to amend the specification to include the material of Boneh et al. as referred to in the specification is again *traversed*. *None of the pending claims even recites the word integer, and it is therefore respectfully submitted that a specific method of the generation of such integers is not essential to the claimed subject matter – as claimed.* In particular, it is respectfully submitted that any review of the cited portions of the Specification and of the claims themselves makes plain that the *generation of partial digital signatures in the absence of a trusted third party (as referred to by the Examiner) is disclosed at page 2, line 33, to page 3, line 15, as is the generation method of partial digital signatures, which is described in detail at page 19, line 32, to page 21, line 14.* The Boneh reference is merely cited as an example for generating integers -- and is not recited for describing the disclosed generation of the partial digital signatures, which is disclosed at page 2, line 33, to page 3, line 15, as is the generation method of partial digital signatures, which is described in detail at page 19, line 32, to page 21, line 14. Withdrawal of the objection to the specification or to the

requirement to explicitly incorporate the integer generation method from the “Boneh” reference is therefore respectfully requested.

With respect to paragraph five (5), claims 7, 10, and 15 to 20 are objected to for assertedly not including transitional phrases. Withdrawal of the objections to claims 7, 10, and 15 to 20 is respectfully requested, since, to facilitate matters, these claims have been canceled without prejudice.

With respect to paragraph six (6), claims 21 to 25 were rejected under 35 U.S.C. 101. While the rejections may not be agreed with, to facilitate matters, claims 23 to 25 have been canceled without prejudice. The rejections as to claims 21 and 22 are traversed, *since these claims are to a method and not a program per se*. It is therefore respectfully requested that the 101 rejections be withdrawn. It is believed that the Final Office Action confuses both Section 101 and claim 21 by asserting that claim 21 is to a “program that does not have a concrete and tangible output”.

*It is noted that the Advisory Action of July 2006 agreed that the rejections were overcome as to claims 21 and 22, and that these claims should be allowed.*

*First, claims 21 and 22 are to a method, and not to a program per se.*

Also, Applicants do not understand why the Examiner is raising this issue in view of the recent Precedential Opinion of the Board of Patent Appeals and Interferences, Ex parte Carl A. Lundgren (paper no. 78), Appeal No. 2003-2088 (U.S. Patent Application Serial No. 08/093,516) (case Heard April 20, 2004). In this Precedential opinion, the Board made plain that any “technological arts” test (which is what the Office Action essentially asserts) is inconsistent with both Federal Circuit and Supreme Court law.

To the extent that the Examiner maintains this rejection in view of Lundgren, it is respectfully requested that the Examiner explain exactly how its rejection is supported in view of the Board’s precedential Lundgren opinion.

Still further, it is respectfully submitted that the rejected claims do satisfy Section 101 since they are directed to a *method* (claims 21 and 22) or to an *apparatus* (claims 23 and 24) which are patentable in each case and which have utility in each case. It is suggested that the Lundgren opinion and the MPEP at 2106 and 2107 (regarding the Examination Guidelines

for the utility requirement) makes plain that claims 21, 22 and 23, 24 have utility under Section 101. It is also respectfully submitted that the reasons advanced in support of the rejection are simply not supported by either the Examination Guidelines or more importantly the case law, and that a *prima facie* case has not been presented as required by Sections 2106 and 2107 of the MPEP.

*In this regard, the Board of Patent Appeals — in reversing another Examiner for ignoring the law of State Street — has stated that claimed subject matter having a “practical application” is § 101 statutory subject matter if the subject matter represents a “useful, concrete and tangible result” under State Street, and has further stated that the Federal Circuit’s reasoning in State Street is “intended to be broadly construed”. See Ex parte Donner, 53 U.S.P.Q.2d 1699, 1702 (Bd. Pat. App. & Int. 1999).*

Still further, the Federal Circuit -- as well as the Patent Office — has not required that *method claims* recite how the method steps are to be performed. In AT&T Corp. v. Excel Communications Inc., 50 U.S.P.Q.2d 1447 (Fed. Cir. 1999), the Federal Circuit stated that the claims of U.S. Patent No. 5,333,184 (“the ‘184 patent”) were plainly directed to § 101 statutory subject matter. See id. at 1452. (“Excel also contends that because the process claims at issue lack physical limitations set forth in the patent, the claims are not patentable subject matter. This argument reflects a misunderstanding of our case law. . . . Since the claims at issue in this case are directed to a process in the first instance, a structural inquiry is unnecessary”).

It is therefore respectfully requested that the Section 101 rejections of claims 21 and 22 be withdrawn in view of the Lundgren precedential opinion of the Board of Patent Appeals and Interferences (in its *per curiam* opinion), the State Street case, and the MPEP at Sections 2106 and 2107.

Claim 21 is to a distributed digital signature generation method for generating and outputting an integrated digital signature.

In particular, and as previously explained, the independent claim 21 as previously rewritten are based on the original dependent claims and the disclosure at page 27, line 8, to page 28, line 26, and Figs.6-8. More particularly, the partial digital signature number set selecting step is based on the disclosure at page 27, lines 8-11 and Fig.6. The signature verification step is based on the disclosure at page 27, lines 15-18. The incorrect partial

digital signature existence determination step is based on the processes of Fig.7, and the incorrect partial digital signature specifying step is based on the processes shown of Fig.8. *The result output step is understood since the presently claimed subject matter is related to a service for generating a digital signature for a digital document in which correct integrated digital signature should be output when the correct integrated digital signature is generated, especially in view of the fact that Figs.9-11 suggest the result output step.* Still further, by adopting the incorrect partial digital signature existence determination step and the incorrect partial digital signature specifying step as provided for in the independent claim 21, the presently claimed subject matter produces remarkable effects, as is essentially discussed at page 29, line 1, to page 31, line 4, and at page 36, line 30 to page 38, line 37, in the specification with reference to Figs.13 and 14.

Accordingly, claim 21 is allowable (as agreed to in the Advisory Action of July 2006), as is its dependent claim 22, as presented.

With respect to paragraph seven (7), claims 1, 3, 7, 9, 13, 15, 17, and 19 were rejected under 35 U.S.C. § 103(a) as obvious over Malkin, Michael et al. "Building Intrusion Tolerant Applications," Darpa Information Survivability Conference and Exposition, 2000 (the "Michael et al." reference), in view of U.S. Patent No. 4,405,829 to Rivest et al.

With respect to paragraph eight (8), claims 4, 6, 10, 12, 14, 16, 18, and 20 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the "Malkin" reference in view of the "Rivest" reference, and further in view of U.S. Patent No. 5,610,982 (the "Micali" reference).

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s)

must teach or suggest all of the claim features. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

While the rejections may not be agreed with, to facilitate matters, these claims have been canceled without prejudice. It is therefore respectfully requested that the obviousness rejections be withdrawn as moot.

Finally, as regards the PRIOR RESPONSE mailed on January 18, 2006 (and insofar as it concerns paragraph eleven (11) of the Final Office Action), the text beginning at line 13 of page 25 (i.e., the second full paragraph of page 25) through line 2 of page 26 of the PRIOR RESPONSE (mailed on January 18, 2006) only concerned new claims 21 to 26 (and should have been adjacent the paragraph concerning "new" claims 21 to 26, since it only concerned those claims) and did not, as written, concern claims 1 to 20.

#### Conclusion

It is therefore respectfully submitted that claims 21 and 22 are allowable (*as indicated in the Advisory Action of July 20, 2006*) – like allowed claim 26. It is therefore respectfully requested that the objections and rejections be withdrawn, since all issues raised have been addressed and obviated. An early and favorable action on the merits is therefore respectfully requested.

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Respectfully submitted,

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